

## ABSTRACT

*Irregular layout of machinery in the local garment division at PT Mulia Knitting Factory Ltd. Has resulted in delay of transfer of materials therefore indirectly affecting production capacity. This study aims the design new layout based on product material flow-shirts using routing sheets, priority scales, from to chart the cost, from to chart inflow, activity relationship charts, activity relationship diagram, and allocation activity diagram. The proposed layout of material handling is expected to enable the division to be more organized, lowering costs and increasing production capacity. Results show that daily transfer material handling costs has decreased into only 7% of the costs before the implementation of the new layout and production capacity has increased 8% compared to previous capacity.*

**Keywords:** *machinery layout, routing sheet, priority scales, activity relationship*

## ABSTRAK

*Layout mesin yang tidak teratur pada divisi garmen lokal di PT Mulia Knitting Factory Ltd. telah menyebabkan terhambatnya perpindahan material sehingga secara tidak langsung mempengaruhi kapasitas produksi. Penelitian ini bertujuan untuk merancang layout baru berdasarkan aliran material produk oblong dengan menggunakan routing sheet, skala prioritas, from to chart the cost, from to chart inflow, activity relationship chart, activity relationship diagram, dan allocation activity diagram. Layout usulan ini diharapkan membuat material handling menjadi lebih teratur, menurunkan biaya dan meningkatkan kapasitas produksi. Hasil penelitian menunjukkan bahwa biaya perpindahan material handling telah berkurang menjadi hanya 7% dari biaya yang dikeluarkan sebelum penerapan layout baru, dan kapasitas produksi meningkat 8% dibandingkan dengan kapasitas sebelumnya.*

**Kata kunci:** *layout mesin, routing sheet, skala prioritas, activity relationship*